



Peaches



Almonds



Plums

# Stone Fruits

Apricots



Cherries



Nectarines



# Stone Fruits

- Closely related to members of the Rose family
- Peaches, plums and apricots have done much better in Texas than nectarines, almonds, and cherries
  - Less susceptible to disease
  - Less susceptible to varmints
  - Less susceptible to crop loss due to premature blooming



# Almonds

# Almonds

- Fruit and tree looks similar to peaches – grown similar to peaches
- Pit is eaten as a nut
- Do not generally do well in Texas
  - Bloom too early in the spring and cold weather injures developing flowers
  - Most varieties susceptible to brown rot and bacterial leaf spot
- No variety is recommended for planting in Texas



Cherries

# Cherries

- Have performed poorly in Texas
  - Require extensive chilling
  - Susceptible to brown rot
  - Developing fruit prone to bird damage
- Low-chill varieties are appearing in the market but have not been tested in Texas
  - Will likely break dormancy very early and expose the flower crop to frost injury

# Cherries - Varieties

- **Royal Lee** – firm, heart shaped. Productive when planted with another variety for pollination. Needs about 200 hours of winter chill to break dormancy and flower.
- **Minnie Royal** – used as a pollinator for Royal Lee. Medium sized. Needs about 200 hours of winter chill to break dormancy and flower.
- Since cherry trees can grow over 40 feet tall, graft to a dwarfing rootstock such as Colt.



Nectarines



# Nectarines

- Mutation of a peach and has NO fuzz
- It is NOT a cross between a peach and a plum!
- Not well adapted to Texas
  - Smooth skin is vulnerable to wind scarring
  - Susceptible to brown rot, fruit splitting, and bacterial leaf spot

# Nectarines – Trial Varieties

- **Karla Rose** – requires 600 chilling hours (below 45 degrees) and is a freestone (easily removable pit) with red skin and white flesh
- **Redgold** – large, glossy red fruit that requires 850 chill hours and is a freestone that ripens in July
- **Rose Princess** – ripens in mid-July and is a freestone that has firm white flesh
- **Arm King** – medium to large fruit with cling pits and flesh that ripens in late May



Apricots

# Apricots

- Thought to have originated in Armenia
- Small trees with a spreading canopy – not uncommon to find trees that are 25 to 30 feet in height and width
- Fruit is similar to a peach – ranging from yellow to orange and often tinged red on the side most exposed to the sun
- Skin is smooth but can be covered with very short hairs

# Apricots

- Self-fruitful – do not require a pollinator
- Fruiting is inconsistent
  - Frost damage causes crop loss
  - Fruit often fails to set regardless of temperature
  - Fruit buds can lose cold hardiness if there are wide temperature swings in late winter
- Do not expect annual crops
- Typically grafted on peach rootstock
- If alkaline soils, an apricot root system is used

# Apricots - Varieties

- **Blenheim** – medium-sized fruit with orange peel and yellow flesh; most consistent performer in Texas, ripens in June
- **Moorpark** – medium-sized to large fruit with orange flesh that ripens in June
- **Bryan** – produces medium-sized fruit that has orange flesh and ripens from late May to early June
- **Chinese** (or **Mormon**) – more cold hardy and has extended bloom; fruit is small to medium



Plums

# Plums

- Tree has white flowers and sets fruit on buds from the previous season's growth
- Usually the fruit has a dusty white coating or wax bloom that is easily rubbed off
- Two main species used in the United States
  - European – grown for fresh fruit and often dried for prunes. Produce poorly in Texas because they require a cold climate and are susceptible to fungal problems
  - Japanese – not self-fruiting, tend to grow and produce better in Texas



# Plum - Varieties

- **Methley** – ripens from late May to early June; fruit is small to medium sized with a mottled purple peel and red flesh; adapted across Texas but is soft and does not store well; self-fruitful and readily pollinates with other plums
- **Santa Rosa** – large purplish plum with amber colored flesh; ripens in late June

# Plum - Varieties

- **Bruce** – large red plum that must be pollinated to bear fruit; ripens about the first of June
- **Morris** – adapted only to regions with 800 or more chill hours; performs best when planted with another variety that will pollinate it; ripens in early June; large plum with red to purple flesh
- **Ozark Premiere** – cross between Methley and Bruce; large plum with yellow flesh and reddish skin; self-fruitful and ripens in late June



Peaches

# Peaches

- The leading deciduous fruit crop in Texas
- Estimated 1 million trees planted statewide
- Late spring frost is the most limiting factor in peach orchard profitability
- Growers should plan on losing one in six or seven crops

# Peaches – Soil

- Excellent drainage is essential to long term tree productivity and survival
- Ideal is a sandy loam topsoil that is at least 18 to 24 inches deep
- Ideal soil pH is between 6 and 7
- In some high pH sites, proper rootstocks may help overcome the nutritional deficiencies that are common in high alkaline soils

# Peaches - Water

- Avoid sites with high salinity (salt) levels in the water
- Abundant, clean, salt-free water is essential for peach production
- A mature, bearing fruit orchard can use more than 2,000 gallons of water per acre per day

# Peaches - Elevation

- To reduce crop losses from spring frost, chose an orchard site that is high in elevation than that of the surrounding area
- Air must move easily out of the orchard to minimize serious damage from spring frosts during bloom and early fruit development

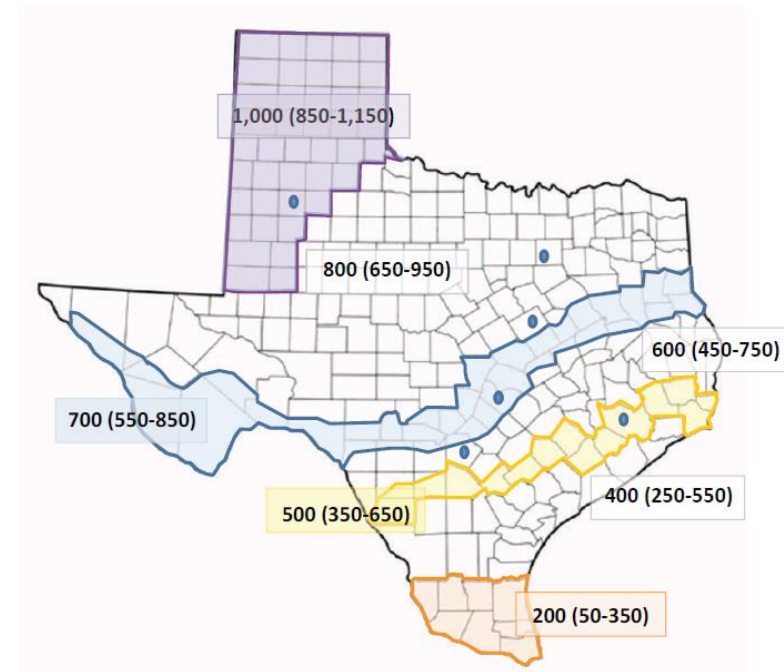
# Peaches – Site History

- Because of soil-borne disease problems, do not replant an old orchard site for at least 3 years after it has been cleared
- Peach trees perform best on sites where no stone fruit orchards or forests have grown for several years
- Do not plant a site that was recently cleared of standing timber, especially post oaks, because the risk is higher for diseases such as oak root rot



# Peaches - Varieties

- Make sure you choose varieties with the right number of chilling hours for your area
- Peaches require a certain amount of winter chilling, typically the number of hours at or below 45 degrees F in a location, in order to break dormancy, bloom, and grow normally in the spring



# Peaches - Varieties

- Varieties that need fewer chilling hours than are common for an area are more likely to bloom early and be more subject to frost
- Varieties that need more chilling hours than are available may break dormancy late and fail to set fruit
- Varieties recommended for a given location typically have chilling requirements within 100 hours of the average accumulation for that site
- Depending upon what part of Leon County you are in, peaches require 600-700 chilling hours

# Peaches - Rootstock

- For sites with coarse soils, choose nematode-resistant rootstocks such as Nemaguard
- For heavier, more alkaline soils, Lovell or Halford rootstocks offer fewer problems with iron and zinc uptake and are more cold hardy than Nemaguard

# Peaches - Planting

- For irrigated orchards, leave 22 to 24 feet between rows and 18 feet between trees
- For non-irrigated or non-cultivated orchards, space rows and trees 24 feet apart – will give the tree more soil to draw from during drought
- Plant in December through early March while trees are dormant
- Prune to a single trunk and cut it back to about 24 to 36 inches tall

# Peaches – Fertilization

- Use a nitrogen fertilizer the first year after planting
- Apply fertilizer at least 18 inches away from the trunk – fertilizers are salts that can burn roots and kill trees
- Fertilize second-year trees four times, March through June
  - If soil pH is below 7.8, can use a 3-1-2 fertilizer
  - If soil pH is above 7.8, use only nitrogen
- Fertilize only when there is active growth

# Peaches - Irrigation

- Make sure the site have a good and plentiful water source
- Design the irrigation system to apply up to 50 gallons of water per tree per day
- After the second year, each tree will need the equivalent of 1 inch of water per week if no rain falls

**TABLE 2: Gallons of water needed per week for 1- and 2-year-old peach trees**

Year	April	May	June	July	Aug	Sept
1	7	7	14	28	28	21*
2	14	14	28	56	56	28*

\*Applying supplemental irrigation in September and October may be unnecessary if seasonal rainfall arrives.

# Peaches – Fruit Thinning

- Most peach varieties set far more fruit than can be grown to large size with good quality
- Thin to control the number of fruit per tree, to increase fruit size and quality, and to ensure adequate leaf growth in the trees
- Thin fruit within 4 to 6 weeks after bloom
- Thin fruit to 6 to 8 inches apart along the fruiting branches
- Pruning can be done by hand or by machine

# Peaches - Harvesting

- Trees will begin bearing a commercial crop in the third or fourth year
- Texas-grown peaches are consumed primarily within the state and are harvested by hand
- Harvest when fruit are firm-ripe and well colored with a red blush over yellow background

